VII. Maintenance and Repair Test Section

A. Overview

The purpose of this section is to define the specific maintenance and repair tests to be undertaken in evaluating the systems and related operational elements associated with BellSouth's maintenance of business with CLECs.

B. Scope

The maintenance and repair test scope is defined in the following table. The table identifies the test target, the interface under test, the primary test objective(s), the BST product offering, and the test technique(s) to be employed.

M&R-1: TAFI Functional Test	TAFI	Functionality	UNE	Transaction Processing
M&R-2: ECTA Functional Test	ЕСТА	Functionality	UNE	Transaction Processing
M&R-3: ECTA Normal Volume Performance Test	ECTA	Volume Performance	Resale UNE	Transaction Processing
M&R-4: ECTA Peak Volume Performance Test	ЕСТА	Volume Performance	Resale UNE	Transaction Processing
M&R-5: TAFI Capacity Management Evaluation	TAFI	Processing Capacity	Resale UNE	Inspection Interview
M&R-6: ECTA Capacity Management Evaluation	ECTA	Processing Capacity	Resale UNE	Inspection Interview
M&R-7: M&R Performance Results Comparison	TAFI/ ECTA	Performance Reporting	Resale UNE	Performance Comparison, Inspection Interview
M&R-8: TAFI Documentation	TAFI	Documentation	Resale	Document

			in the second	
Evaluation			UNE	Review Interview
M&R-9: ECTA Documentation Evaluation	ECTA	Documentation	Resale UNE	Document Review Interview
M&R-10: M&R Process Evaluation	TAFI ECTA	Performance	Resale UNE	Document Review Inspection Interview

Note: Since TAFI is in large volume production in BellSouth's retail environment, no volume or peak tests are planned.

Figure VII-I: Maintenance & Repair Test Cycles

C. Test Cycles

1.0 M&R-1: TAFI Functional Test

1.1 Description

The TAFI Functional Test will evaluate the functional elements of the trouble reporting and screening process for telephone number assigned UNEs, as delivered to CLECs via the TAFI interface in BellSouth's production environment. This test cycle will be executed by exercising a defined set of TAFI functions associated with trouble management activities against test bed accounts.

The functional elements of TN-based UNE trouble reporting and screening to be specifically targeted by this test include the entry and resolution of trouble reports, query and receipt of status reports, access to test capabilities, access to trouble history, and error conditions.

TAFI functionality will be reviewed along with the documentation addressing its use. BellSouth will be required to identify or establish a test bed of TN-based UNE customer accounts for the purpose of this test.

The Test Manager will coordinate with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track test transaction performance prior to beginning the test.

1.2 Objective

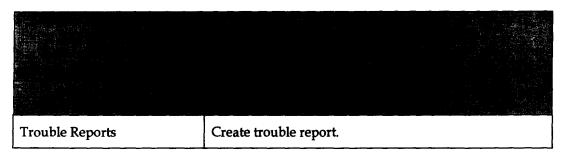
The objective of the TAFI Functional Test is to validate the existence of TAFI trouble reporting and screening functionality for telephone number-assigned UNE customers in accordance with the CLEC TAFI End User Training and User Guide.

1.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- CLEC TAFI End-User Training and User Guide obtained.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track test transactions.
- BellSouth's test bed customer account data loaded and verified by Test Manager.
- Expected results files and test logs completed.
- Test management tools installed and fully configured with test account data.
- TAFI account and security access tools established.
- TAFI terminal stations established and configured.
- TAFI connectivity established.
- Test execution team identified, scheduled, and trained.
- Test Plan and evaluation criteria defined and approved.

1.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate TAFI functionality.



	Modify trouble report.		
	Create repeat report.		
	Create subsequent report.		
	Retrieve LMOS recent status report.		
	Execute manual queuing capabilities		
	Execute supervisor functions		
Access to Test Capability	Initiate port and loop-port test.		
	View port and loop-port test results.		
	Obtain customer line record.		
	Obtain predictor results.		
	View DLR (Display Line Record).		
	View SOCS pending order (open issue).		
	Close trouble report.		
	Cancel trouble report.		
Access Error Reports	Reset communications.		
	Host request errors.		
Trouble History	Retrieve trouble history.		
Trouble Status	View pending ticket status.		

Figure VII-II: TAFI Functional Test Scope

1. Review detailed test cycle checklist to ensure that all activities are addressed.

- 2. Assign TAFI Ids and assign terminals for testing.
- 3. Submit TAFI test case transactions according to schedule.
- 4. Log transaction identifier(s) and submission date/time stamp.
- 5. Receive transaction responses.
- 6. Log transaction identifier(s) and receipt date/time stamp.
- 7. Verify that transaction response contains expected results.
- 8. Analyze timeliness performance.
- 9. Flag any exceptions or mismatched responses and determine next steps in exception process.
- 10. Generate test results report.

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

2.0 M&R-2: ECTA Functional Test

2.1 Description

The ECTA Functional Test will evaluate the functional elements of the trouble reporting and screening process for both telephone number assigned and circuit identified UNEs as delivered to CLECs via the ECTA interface. This test cycle will be executed by exercising a defined set of ECTA functions associated with trouble management activities against test bed accounts.

The functional elements of TN-based and circuit identified UNE trouble reporting and screening to be targeted by this test include the entry and resolution of trouble reports, the query and receipt of status reports, access to test capabilities, access to trouble reports, and error conditions. The ECTA Functional Test will be conducted against BellSouth's production environment system.

ECTA functionality will be reviewed in conjunction with the documentation addressing its use.

BellSouth will be required to identify or establish a test bed of existing TN-based and circuit-identified UNE customer accounts for the purpose of this test.

The Test Cycle Manager will coordinate efforts with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track Build test transaction performance prior to beginning the test.

2.2 Objective

The objective of the ECTA Functional Test is to validate the existence of ECTA trouble reporting and screening functionality for both telephone number assigned and circuit identified UNE customers in accordance with BellSouth's published specifications.

2.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- ECTA documentation obtained.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track test transactions.
- BellSouth's test bed customer account data loaded and verified by Test Manager.
- Expected results files and test logs completed.
- Test management tools installed and fully configured with test account data.
- ECTA account and security access tools established.
- ECTA terminals established and configured.
- ECTA connectivity established.
- Test execution team identified, scheduled, and trained.
- Test Plan and evaluation criteria defined and approved.

2.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA functionality.

Trouble Reports	Create trouble report.	
	Modify trouble report.	
	Add trouble information.	
	Cancel trouble report.	
	Request trouble ticket status.	
	Verify Repair Completion.	
Access to Test Capability	Conduct MLT test.	

Figure VII-III: ECTA Functional Test Scope

- 1. Review detailed test cycle checklist to ensure that all activities are addressed.
- 2. Assign ECTA IDs and terminals for testing.
- 3. Submit ECTA test case transactions according to schedule.
- 4. Log transaction identifier(s) and submission date/time stamp.
- 5. Receive transaction responses.
- 6. Log transaction identifier(s) and receipt date/time stamp.
- 7. Verify that transaction response contains expected results.
- 8. Analyze timeliness performance.
- 9. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
- 10. Generate test results report.

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

3.0 M&R-3: ECTA Normal Volume Performance Test

3.1 Description

The ECTA Normal Volume Performance Test will evaluate the behavior and performance of the ECTA interface under "normal" YE01 projected transaction load conditions. This test cycle will be executed by a test transaction generator capable of submitting large volumes of resale services and UNE trouble test cases in a manner consistent with ECTA's current and forecasted daily usage patterns and transaction mix, including error conditions.

BellSouth's estimates of YE01 trouble reports for ECTA will be used to calculate hourly transaction levels. The test will be executed during two ten-hour periods by modeling the expected normal daily usage (e.g., the off-peak nighttime hour loads will be excluded for the test). Trouble transaction loads will be distributed geographically across multiple Georgia COs to more accurately reflect a realistic operating environment. BellSouth will ensure that customer test accounts are established and configured accordingly.

The Test Manager will coordinate efforts with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track Build test transaction performance prior to beginning the test.

3.2 Objective

The objective of the ECTA Normal Volume Performance Test is to measure the performance of the ECTA interface under normal projected YE01 transaction loads.

3.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- M&R-2: ECTA Functional Test successfully completed.
- Test transaction tracking data elements identified.

- Normal volume level defined.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track transactions.
- Successful certification testing for ECTA completed.
- Test Plan defined and approved.

The test scope will address the following sub-processes and functions to evaluate ECTA normal performance.

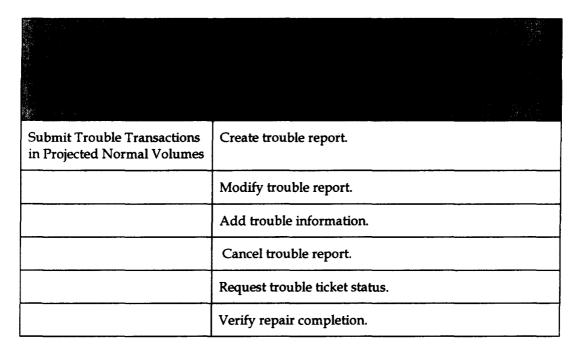


Figure VII-IV: ECTA Normal Volume Performance Test Scope

3.5 Test Activities

- 1. Submit ECTA test case transactions according to schedule.
- 2. Log transaction identifier(s) and critical performance responsiveness/time stamp information.
- 3. Verify that transaction responses meet expected results.
- 4. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.

- 5. Perform volume responsiveness analysis.
- 6. Generate test results reports.

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

4.0 M&R-4: ECTA Peak Volume Performance Test

4.1 Description

The ECTA Peak Volume Performance Test will evaluate the behavior and performance of the ECTA interface under peak YE01 projected transaction load conditions. This test cycle will be run following the execution of the ECTA Normal Volume Performance Test (M&R-3) and will utilize a sample of resale services and UNE trouble test cases, including error conditions.

The peak volume forecast will be developed using the peak hourly load identified for the ECTA Normal Volume Performance Test and replicating those transaction volumes across an eight-hour period. Alternatively, a multiple may be applied to the non-peak hourly load and the result replicated across an eight-hour day. The methodology and calculations are discussed further in **Appendix C: Volume Analysis**.

The peak volume test will be executed during two separate eight-hour periods. BellSouth will ensure that customer test accounts are established and configured accordingly. Trouble transaction loads will again be distributed geographically across multiple Georgia COs to more accurately reflect a realistic peak load operating environment.

The Test Cycle Manager will coordinate efforts with BellSouth to ensure that BellSouth's and KPMG's performance measurement systems are prepared to track Build test transaction performance prior to beginning the test.

4.2 Objective

The objective of the ECTA Peak Volume Performance Test is to measure the performance of the ECTA interface under peak projected YE01 transaction loads.

4.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- M&R-3: ECTA Normal Volume Test successfully completed.
- Test transaction tracking data elements identified.
- Peak level volume defined.
- BellSouth's and KPMG's performance measurements tracking systems prepared to track transactions.
- Successful certification testing for ECTA test tools completed.
- Test Plan defined and approved.

4.4 Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA peak performance.

Submit Trouble Transactions in Projected Peak Volumes	Create trouble report.
	Modify trouble report.
	Add trouble information.
	Cancel trouble ticket.
	Request trouble ticket status.
	Verify repair completion.

Figure VII-V: ECTA Peak Volume Performance Test Scope

- 1. Submit ECTA test case transactions according to schedule.
- 2. Log transaction identifier(s) and critical performance responsiveness/date/time stamp information.
- 3. Verify that transaction responses meet expected results.
- 4. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
- 5. Perform volume responsiveness analysis
- 6. Generate test results report.

4.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

5.0 M&R-5: TAFI Capacity Management Evaluation

5.1 Description

The TAFI Capacity Management Evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of the TAFI interface.

5.2 Objective

The objective of this evaluation is to determine the extent to which procedures to accommodate increases in TAFI system transaction volumes and users are being actively managed.

5.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.

- Interview Guide / Questionnaire developed.
- Interviewees identified and scheduled.
- Detailed evaluation checklists developed.

The test scope will address the following sub-processes involved in evaluating the management processes and capabilities of BellSouth to support capacity changes in the TAFI process.

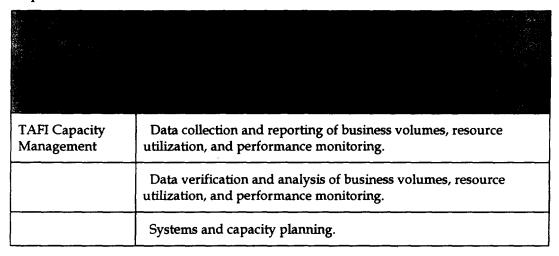


Figure VI-VI: TAFI Capacity Management Test Scope

5.5 Test Activities

The test scope will address the following sub-processes and functions to evaluate TAFI capacity management.

- 1. Review procedural and other documentation related to TAFI capacity management.
- 2. Conduct interviews with key systems administration and support personnel as appropriate.
- 3. Document findings.
- 4. Resolve exceptions.

5.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.

- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

6.0 M&R-6: ECTA Capacity Management Evaluation

6.1 Description

The ECTA Capacity Management Evaluation is a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the use of the ECTA interface.

6.2 Objective

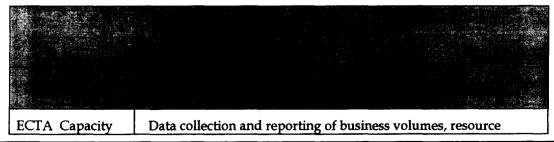
The objective of this evaluation is to determine the extent to which procedures to accommodate increases in the ECTA system transaction volumes and users are being actively managed.

6.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Availability of documentation identified as input.
- Interview Guide / Questionnaire developed.
- Interviewees identified and scheduled
- Detailed evaluation checklists developed.
- Test Plan and evaluation criteria defined and approved.

6.4 Test Scope

The test scope will address the following sub-processes involved in evaluating the management processes and capabilities of BellSouth to support capacity changes in the ECTA process.



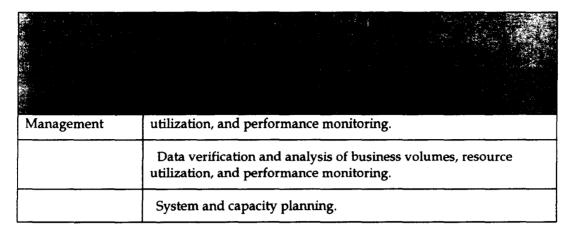


Figure VII-VII: ECTA Capacity Management Evaluation Test Scope

The test scope will address the following sub-processes and functions to evaluate ECTA capacity management.

- 1. Review procedural and other documentation related to ECTA capacity management.
- 2. Conduct interviews with key systems administration and support personnel as appropriate.
- 3. Document findings.
- 4. Resolve exceptions.

6.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.

7.0 M&R-7: M&R Performance Results Comparison

7.1 Description

The M&R Performance Results Comparison is a comparative analysis of M&R performance results collected by KPMG test management tools and by BellSouth's OSS

performance measurement system. The source results collected from M&R-1: TAFI Functional Test, M&R-2: ECTA Functional Test, M&R-3: ECTA Normal Volume Performance Test, and M&R-4: ECTA Peak Volume Performance Test will be compared to BellSouth's performance results; accuracy and trends will be identified; and disparities will be analyzed for significance.

7.2 Objective

The objective of the M&R Performance Results Comparison is to assess the accuracy of BellSouth's wholesale performance metrics results using Build test transactions.

7.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- Results comparison strategy defined.
- Target M&R performance metrics identified.
- Keys required for BellSouth to separate Build transactions identified.
- TAFI/ECTA Functional Tests completed with disaggregated performance metrics reports (including raw data in electronic form).
- Functional tests will include faults where appropriate.
- ECTA Normal and Peak Volume Performance Tests completed with disaggregated performance metrics reports (including raw data in electronic form).
- Test execution scheduled.
- Test logs created and results reporting template completed.
- Test execution team staffed, scheduled, and trained.
- Test Plan and evaluation criteria defined and approved.
- Guidelines for measuring variances defined.

7.4 Test Scope

The test scope will address the following sub-processes and functions to compare performance results.

Missed Repair Appointment	UNE Designed.
	UNE Non-Designed.
Percentage of Subsequent Reports	UNE Designed.
	UNE Non-Designed.
Maintenance Average Duration	UNE Designed.
	UNE Non-Designed.
Out of Service > 24 Hours	UNE Designed.
	UNE Non-Designed.
Repeat Troubles within 30 Days	UNE Designed.
	UNE Non-Designed.
OSS Response Interval	UNE Designed.
	UNE Non-Designed.
Average Answer Time	UNE Designed.
	UNE Non-Designed.

Figure VII-VIII: M&R Performance Results Comparison Test Scope

- 1. Acquire and format BellSouth performance data files.
- 2. Compare disaggregated BellSouth performance results with Build performance results.
- 3. Flag any unexplained variance(s) in results comparison and determine next steps in exception and resolution process.
- 4. Generate comparative analysis results reports.

- Global Exit Criteria satisfied.
- Comparative analysis report completed.
- Results variance findings documented.
- Exception report completed.
- Test cycle results summary report completed.
- Exit review completed.

8.0 M&R-8: TAFI Documentation Evaluation

8.1 Description

The TAFI Documentation Evaluation is an analysis of the BellSouth-provided documentation used by CLECs to interface and interact with the TAFI interface for maintenance and repair activities. This evaluation is intended to review the availability, accuracy, and completeness of BellSouth's maintenance and repair documentation using a variety of operational analysis techniques. This test uses records of observations from M&R-1: TAFI Functional Test and CLEC TAFI End User Training Manuals to identify exceptions in documentation and functionality described in the business rules.

8.2 Objective

The objective of the TAFI Documentation Evaluation is to assess whether the documentation provided by BellSouth adequately assists CLECs in understanding how to implement and use all of the TAFI functions available to them.

8.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- TAFI documentation obtained.
- Teams staffed, scheduled, and trained.
- Documentation evaluation checklists completed.
- Test Plan and evaluation criteria defined and approved.
- Interview guide/questionnaire developed.
- Interviewees identified and scheduled.

- Exception reports due to documentation from M&R 1: TAFI Functional Test obtained.
- BellSouth and CLEC documentation order specialist and user contact information obtained.
- Process for logging incidents defined and accepted.

The test scope will address the following sub-processes and functions to evaluate TAFI documentation along with additional relevant information identified during the test.

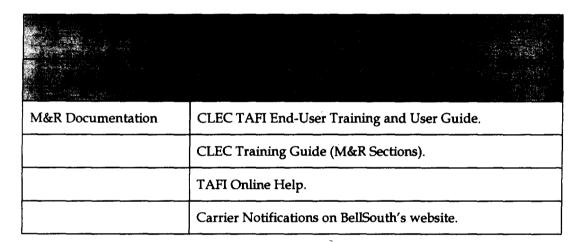


Figure VII-IX: TAFI Documentation Evaluation Test Scope

8.5 Test Activities

- 1. Obtain relevant documentation needed to carry out business processes related to M&R.
- 2. Conduct documentation evaluation using documentation evaluation checklist.
- 3. Conduct interviews with BellSouth documentation specialists.
- 4. Conduct interviews with CLEC documentation users.
- 5. Log incidents noted during test.
- 6. Compile results.
- 7. Flag any exceptions or mismatched responses and determine next steps in execution resolution process.

- Global Exit Criteria satisfied.
- Documentation checklists completed.
- Interview summaries completed.
- Exception report(s) completed.
- Summary evaluation report completed.
- Exit review completed.

9.0 M&R-9: ECTA Documentation Evaluation

9.1 Description

The ECTA Documentation Evaluation is an analysis of the BellSouth-provided documentation used by CLECs to interface and interact with the ECTA interface for maintenance and repair activities. This evaluation is intended to review the accuracy, ease of use and conformance to ANSI standards of BellSouth's maintenance and repair documentation using a variety of operational analysis techniques. This test will use records of observations from M&R-2: ECTA Functional Test and CLEC ECTA End User Joint Implementation Agreement (JIA) to identify issues with documentation and functionality described in the business rules.

9.2 Objective

The objective of the ECTA Documentation Evaluation is to comment on whether the documentation provided by BellSouth adequately assists CLECs in understanding how to implement and use all of the ECTA functions available to them.

9.3 Entrance Criteria

- Global Entrance Criteria satisfied.
- ECTA documentation obtained.
- Teams staffed, scheduled and trained.
- Documentation evaluation checklist completed.
- Test Plan and defined and approved.

- Issues due to documentation from M&R-2: ECTA Functional Test obtained.
- Process for logging issues defined and accepted.

The test scope will address the following sub-processes and functions to evaluate ECTA documentation along with additional relevant information identified during the test.

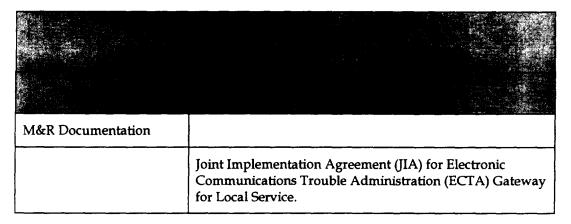


Figure VII-X: ECTA Documentation Evaluation Test Scope

9.5 Test Activities

- 1. Obtain relevant documentation needed to carry out business processes related to M&R.
- 2. Conduct documentation evaluation using documentation evaluation checklist.
- 3. Log incidents noted during testing.
- 4. Compile results.
- 5. Flag any exceptions or mismatched responses and determine next steps in execution resolution process.

9.6 Exit Criteria

- Global Exit Criteria satisfied.
- Documentation checklists completed.
- Interview summaries completed.

- Summary evaluation report completed.
- Exit review completed.

10.0 M&R-10: M&R Process Evaluation

10.1 Description

This evaluation is comprised of two major elements. The first (Sub-Test 1) evaluates the functional equivalence of BellSouth's M&R processes for wholesale and retail trouble reports. Process flows for wholesale and retail trouble management will be reviewed and evaluated along with technician methods and procedures (M&P) and job aids for wholesale trouble repair.

The second element (Sub-Test 2) involves the execution and observation of selected M&R test scenarios to evaluate BellSouth's performance in making repairs under the conditions of various wholesale maintenance scenarios.

10.2 Objective

The objective of Sub-Test 1 is to evaluate the equivalence of BellSouth's end-to-end processes for retail and wholesale trouble reporting and repair. The objective of Sub-Test 2 is to evaluate BellSouth's performance in making repairs under the conditions of various wholesale maintenance scenarios.

10.3 Entrance Criteria

The entrance criteria for this test are presented by sub-test.

10.3.1 Entrance Criteria for Sub-Test 1

- Global Entrance Criteria satisfied
- Retail and Wholesale process flow documentation available.
- Retail and Wholesale Technician job aids (e.g. M&Ps) are available.

10.3.2 Entrance Criteria For Sub-Test 2

- Global Entrance Criteria satisfied.
- BellSouth's and KPMG's performance measurement tracking systems prepared to track test transactions.

- BellSouth test-bed and customer account data loaded and verified by Test Manager.
- Test scenarios selected and approved.
- Evaluation criteria, expected result files and test logs defined and approved.

The test scope will address the following sub-processes and functions to evaluate the M&R process.

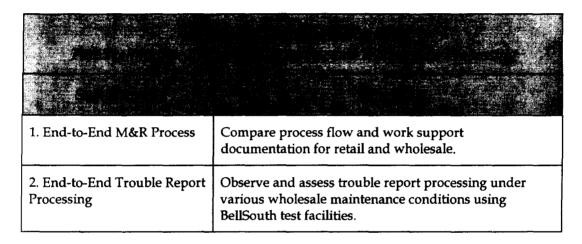


Figure VII-XI: M&R Process Test Scope

10.5 Test Activities

The test activities for this test are presented by sub-test.

10.5.1 Test Activities Sub-Test 1

- 1. Identify and obtain all process and work support (e.g. M&Ps) documentation available for review.
- 2. Review documentation and identify differences between wholesale and retail processes.
- 3. Interview BST personnel to ascertain parity in M&R process between retail and wholesale.
- 4. Flag any exceptions and determine next steps in exception resolution process.
- 5. Document process analysis results.

10.5.2 Test Activities Sub-Test 2

- 1. Confirm that test bed facilities are operational and introduce faults as needed.
- 2. Conduct circuit test if applicable for each test scenario.
- 3. Log test results.
- 4. Create and submit trouble ticket via TAFI or ECTA.
- 5. Periodically monitor each trouble report throughout its life.
- 6. Log significant events in the trouble report life cycle (error occurrences, corrections, trouble ticket submission time, time cleared, etc.)
- 7. Calculate time to repair measurements for each test scenario fault repaired.
- 8. Document observations.
- 9. Flag any exceptions or mismatched responses and determine next steps in exception resolution process.
- 10. Generate test results report.

10.6 Exit Criteria

- Global Exit Criteria satisfied.
- Exception resolution activities and reports completed.
- Expected results versus actual test case results reported.
- Test report generated.
- Exit review completed.